

# Suppression of Northern Pike in Box Canyon Reservoir, Pend Oreille River



**Objective:** Reduce the abundance of northern pike (NP) in Box Canyon Reservoir from 13.2 NP/net to  $\leq 1.73$  NP/net between Riverbend and Pioneer Park and  $< 0.5$  NP/net north of Riverbend. (87% reduction in population).

**Rationale:** The present NP population in Box Canyon Reservoir is not sustainable and is inconsistent with conservation goals. In addition, WDFW and KNRD have concerns regarding downstream entrainment of NP into the Columbia River system and illegal introductions into adjacent waters.

**How:** We will employ a 3-pronged approach consisting of recreational angler harvest, fishing derbies, and mechanical removal to control NP abundance in Box Canyon Reservoir beginning in 2012. The approach will be adaptive, so if methods prove impractical or ineffective, changes will be made to improve the suppression program. As resources become available, other methods may also be incorporated. Efficacy of NP removal will be measured in the annual SPIN Survey.



**General Angler Harvest:**

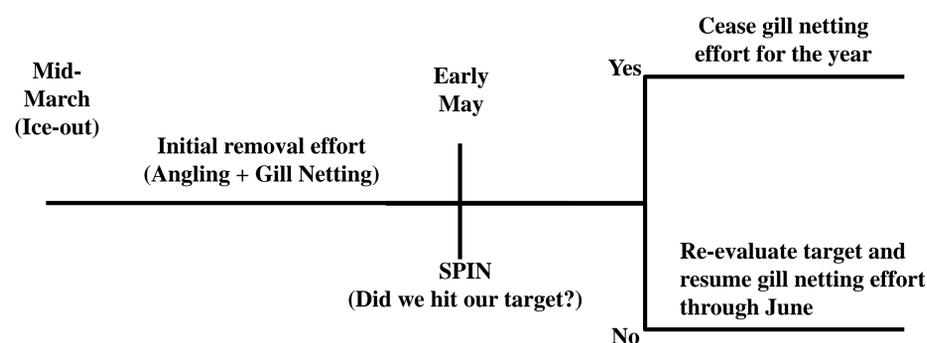
- Estimated angler exploitation in 2010 was 20% of adult population
- WDFW and KNRD will promote angler harvest as a key component for controlling the NP population

**Fishing Derbies:**

- Harvest tournaments with incentives (cash, prizes, etc.)
- Positive economic impact for Pend Oreille County
- At least one NP fishing derby planned for 2012 with minimum of \$5000 in incentives

**Mechanical Removal:**

- Gill netting in selected slough locations from March through early June
- Attempt to remove NP prior to spawning
- Initial removal effort: 6 weeks @ 7 days/week

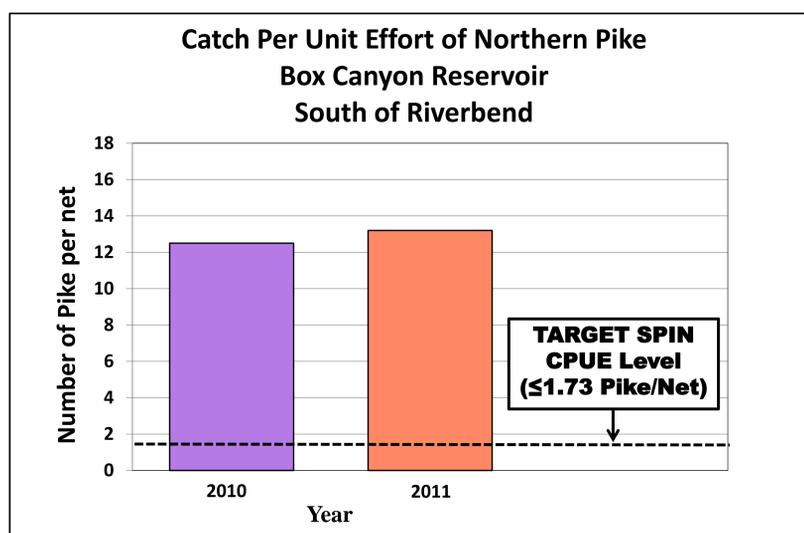


**Estimated NP Removals and Measuring Efficacy**

- Angler harvest March/April = 300 NP
- Mechanical suppression March/April  $\leq 5700$  NP
- Conduct SPIN survey
  - Target  $\leq 1.73$  NP/net = 70 NP for SPIN Survey
  - If target CPUE met, cease gill netting effort
  - If target CPUE not met, re-evaluate target and continue gill netting effort
- Northern pike fishing contest scheduled for summer 2012 = ??

**Implementing Mechanical Removal**

- 24' shallow-draft landing craft vessel with hydraulic gill net drum roller
- 150' x 6' multimesh SPIN gill nets 1", 1.25", 1.5", 1.75", 2" set singly or ganged
- Two 2-man crews netting from ice-off through June
- Approximately 12-15 nets/day set at saturation levels (based on surface area)
- Net 25-30 slough and backwater spawning locations
- Target = 87% reduction in catch at each site for season
- One complete pass prior to SPIN survey



**Long-Term Outlook**

In order for anglers to play a meaningful role in controlling the abundance of NP in Box Canyon Reservoir, they must be willing to harvest a large percentage of the population annually.

Increased angler exploitation will be necessary in the future in order to reduce the amount of mechanical suppression effort required to keep the population in check, once target abundance is achieved.

**Suppression Summary**

- Necessary to reduce conservation risk
- Approach will consist of general angler harvest, fishing derbies with incentives, and mechanical removal
- Suppression will likely take multiple years and annual evaluation
- Approach is adaptive
- The goal is long-term suppression with a target of  $\leq 1.73$  NP/net in the SPIN survey for the southern half of the reservoir and  $\leq 0.5$ /net in the northern half